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10/565,462	01/20/2006	Stephen Mark McAllister	PU60404	9920

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EXAMINER	
TRAN, SUSAN T	

ART UNIT	PAPER NUMBER
1615	

NOTIFICATION DATE	DELIVERY MODE
12/21/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/565,462	MCALLISTER ET AL.	
	Examiner	Art Unit	
	S. TRAN	1615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 October 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *37-41 and 44-108* is/are pending in the application.

4a) Of the above claim(s) *37-41,44-72 and 87-89* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *73-86 and 90-108* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12/18/09; 08/03/10*.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of Group II (claims 73-108) in the reply filed on 10/15/10 is acknowledged. The traversal is on the ground the subject matter of Group II drawn to "a capsule dosage form" presents the same burden on the examiner for searching as review of the claims of Group I. The only difference between these two groups is that in group I the solid matrix is comprised of the extruded and injection molded composition, and the capsule shell is undefined, whereas in Group II it is the capsule shell being comprised of the extruded and injection molded composition, and the solid matrix is undefined. The composition of the material is the same in both. This is not found persuasive because as admitted by the Applicant, the capsule shell of Group II is defined, and requires that the shell to have at least two surfaces, the inner and the outer surface, and wherein the shell is composed of an extruded and injection molded. This features are not required by the capsule of Group I.

The requirement is still deemed proper and is therefore made FINAL.

Applicant also elected the following species:

1) two HPC polymers of differing molecular weight as that of claim 38;

2) stearyl alcohol as a lubricant;

3) disintegrant as a dissolution modifying excipient;

4) sodium starch glycollate (Applicant pointed out that disintegrant is not recited in claim 81 as noted by the Examiner. Applicant is correct in this matter, however, it is readily apparent that in the restriction requirement dated 07/19/10, the phrase “claim 81”

was a typographical error. Sodium starch glycollate is clearly present in Group II and is recited in claim 84. Hence, the election of sodium starch glycollate reads on the election of a single species recited in claim 84 with respect to the disintegrant);

5) sodium dodecyl sulphate as a surfactant; and

6) vitamin E-TPGS as an absorption enhancer.

Claims 37-41, 44-72 and 87-89 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 10/15/10.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 73-86 and 90-108 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. While the present specification at page 6, lines 9-10 discloses that Eudragit 4135F has an *average* molecular weight of about 220,000, the specification does not appear to provide support for the "molecular weight of about 220,00[0]" recited in line 10 of claim 73.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 73-86 and 90-108 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 73 recites the phrase "each sub-unit being selected from" in line 2. This phrase is confusing because it is not entirely clear if each of the sub-unit is comprised of both (a) and (b), or (a) or (b) in an alternative manner. For examining purpose, the claims are interpreted such that (a) and (b) are present together.

Claim 73 recites the limitation "molecular weight of about 220,00". This molecular weight appears in correct. According to the present specification, the molecular weight is 220,000, and is directed to an *average* molecular weight.

Claim 73 is rejected because it is not entirely clear whether components (i) through (vi) are required altogether or alternatively. For examining purpose, the claims are interpreted to comprise components (i) through (vi) altogether.

Claim 73 recites the limitation "wherein the shell material between and including the inner and outer surfaces" in lines 24-25. There is insufficient antecedent basis for this limitation in the claim. There is no limitation of the shell material in between the inner and outer surfaces" recited earlier in the claim.

Claim 73 recites the limitation "release of the drug substance contained in the solid matrix" in line 31. There is insufficient antecedent basis for this limitation in the claim.

Claims 107 and 108 contain the trademark/trade name Eudragit 4135F, Klucel EF, Klucel JF, and Klucel GF. Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe the copolymer of methyl acrylate, methyl methacrylate and methacrylic acid, and the HPMC. Accordingly, the identification/description is indefinite.

Double Patenting

Claims 1-3 and 7-14 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-8, 26-28, 108-110 and 118-120 of copending Application No. 10/060603 ('603).

This rejection has been withdrawn in view of Applicant's Remarks filed 12/01/09. See pages 15-18.

Claim Rejections - 35 USC § 103

Claims 73-86 and 90-108 are rejected under 35 U.S.C. 103(a) as being unpatentable over McAllister et al. US 2003/0049311, in view of Nishioka et al. US 5,861,173 or Gidwani et al. US 6,270,797 or Li et al. US 7,476,403.

McAllister teaches a capsule comprising a shell composed of an extruded and injection molded capsule composition material comprising Eudragit 4135F present in an amount of 30 to 90%, a lubricant from 0 to about 30% w/w, at least one dissolution modifying excipient present in an amount from about 5 to 70% w/w selected from the group consisting of a swellable solid, a disintegrant, a non-reducing sugar, and a water soluble filler, or a combination or mixture thereof, and optionally a plasticizer from about 0 to 5% w/w and/or a processing agent from about 0 to about 10%. See abstract; paragraphs 0124-0136; and claims. The composition further comprises surfactant, plasticizer, and processing aid (paragraphs 0141-0145 and 0153-0154). Dissolution modifying agents include hydroxypropyl cellulose (HPC). See paragraphs 0146-0151. McAllister further teaches the use of lubricant such as stearyl alcohol in an amount of from about 0 to about 30% (paragraph 0155-0156). The composition further comprises hydrophilic excipient such as HPC (paragraphs 0195-0197).

McAllister does not explicitly teach mixture of at least two HPC having different MW. However, such combination is known in the art. See for example:

Nishioka at column 2, lines 25-50, teaches combining HPC of different viscosity levels to obtain any release profile desired;

Gidwani teaches a sustained release composition comprising combination of HPC having different MW (column 3, lines 51-61; and example 4). Gidwani further teaches the ratio between the at least two HPC with different MW is from about 1:6 to 6:1 (column 4, lines 1-7); and

Li teaches an oral extended release composition comprising mixture of at least two HPC having different MW (column 10, lines 47-59; Tables 8-10; and claims).

Thus, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to optimize the injection molding composition of McAllister to include mixture of at least two HPC in view of the teachings of Nishioka, or Gidwani, or Li to obtain the claimed invention. This is because Nishioka teaches that selecting and combining at least two HPC of different viscosity levels, release profile of a dosage form can be adjusted; because Gidwani teaches that mixture of at least two HPC to obtain a sustained release profile is known in the art; because Li teaches that combining same polymers with different viscosity (V_1 and V_2), the release rate of the drug from the dosage form can be modified by adjusting the ratio of the polymers (column 8, lines 32-36); because McAllister teaches that two or more polymers may be used in combination to form blends having the desired drug release profile (paragraph 0183), and because McAllister teaches the desirability for combining at least two dissolution (release) modifying agents.

Claims 73-86 and 90-108 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al. WO 02/060384 A2, in view of Nishioka et al. US 5,861,173 or Gidwani et al. US 6,270,797 or Li et al. US 7,476,403.

Brown teaches an injection molded composition comprising 20-90% Eudragit 4135F, 0-10% surfactant, plasticizer, 0-10% processing aid, 0-30% lubricant such as stearyl alcohol, and 5-70% dissolution modifying agent such as HPC (pages 26-29, 34-36; and claims). The composition further comprises an absorption enhancer such as chitosan, lecithin, lectin, vitamin E, and mixture thereof (claims 23-24). The injection molded composition is suitable for the making of single capsule shell or multi-component capsule that comprises a plurality of sub-units (abstract; page 29, lines 29 through page 30, lines 1-6; and claims 39-42). The sub-units include drug substances that can be the same or different (page 30, lines 16-37).

Brown does not explicitly teach mixture of at least two HPC having different MW. However, such combination is known in the art. See for example:

Nishioka at column 2, lines 25-50, for the teachings of combining HPC of different viscosity levels to obtain any release profile desired;

Gidwani teaches a sustained release composition comprising combination of HPC having different MW (column 3, lines 51-61; and example 4). Gidwani further teaches the ratio between the at least two HPC with different MW is from about 1:6 to 6:1 (column 4, lines 1-7); and

Li teaches an oral extended release composition comprising mixture of at least two HPC having different MW (column 10, lines 47-59; Tables 8-10; and claims).

Thus, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to optimize the injection molding composition of Brown to include mixture of at least two HPC in view of the teachings of Nishioka, or Gidwani, or Li to obtain the claimed invention. This is because Nishioka teaches that selecting and combining at least two HPC of different viscosity levels, release profile of a dosage form can be adjusted; because Gidwani teaches that mixture of at least two HPC to obtain a sustained release profile is known in the art; because Li teaches that combining same polymers with different viscosity (V_1 and V_2), the release rate of the drug from the dosage form can be modified by adjusting the ratio of the polymers (column 8, lines 32-36); because Brown teaches that two or more polymers may be used in combination to form blends having the desired drug release profile (page 25, lines 24-26), and because Brown teaches the desirability for combining at least two dissolution (release) modifying agents (page 28; and claims 11-17).

It is noted that both McAllister and Brown are silent with respect to the teaching of the Eudragit 4135 F. However, the burden is shifted to Applicant to show that Eudragit 4135 F of the cited references does not have the claimed molecular weight. This is because McAllister and Brown teach the use of the same copolymer.

Response to Arguments

Applicant's arguments filed 12/01/09 have been fully considered but they are not persuasive.

Applicant argues that McAllister is directed to the use of an entirely different copolymer, having a differing release rate characteristic in the patients gastro-intestinal environment than that of the present invention. McAllister uses a polymer, Eudragit EI00 (also referred to as Aminoalkyl Methacrylate Copolymer E), which is a cationic copolymer. As noted on paragraph 0131: "The polymer Eudragit 4135F dissolves only above pH 7, e.g. in the colon and so is suitable for formulation as a sustained release component. In contrast, the polymer Eudragit EI00 dissolves in acid as so is suitable for use as an immediate release component." In contrast, the present invention is directed to the use of the polymer Eudragit 4135F which when blended in accordance with the excipients herein produces an erodible, and pH-independent formulation with reproducible release times in the order of 2 hours+.

However, Applicant's attention is called to paragraph 0126, which teaches that a particular polymer…has been found to be a preferred polymer for use in the present invention…is also known as Eudragit ® 4135F. The Examiner notes the teachings at paragraph 0131 as pointed out by the Applicant. However, this paragraphs suggest nothing with respect to not using the "preferred" Eudragit ® 4135 F but E100™ instead. The present claims do not require that the capsule is a sustained release or immediate release.

Further, in response to applicant's argument that McAllister fails to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., *the polymeric composition of the present application, which is extruded and*

injection molded into the capsule shells or various capsule component subunits, such as a linker or end cap have a slower rate of release of the contents of the capsule compartment or separation of the linker from the capsule component, etc., but a rate of release which is faster than a sustained or delayed release component. The present components also appear reproducibly the contents of the capsule compartment release, into the patients gastro-intestinal environment, in the order of 2 hours plus, e.g. in the small intestines, as opposed to the stomach (gastric fluids) or with significant release delay into the colon) are not recited in the rejected claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant argues that the Examiner comments that "McAllister teaches the desirability for combining at least two dissolution (release) modifying agents" (See Office Action, page 7, first line). Looking at paragraph 0147 in the McAllister application, the specific use of swellable solids, includes "polyethylene oxide, hydroxypropylmethylcellulose and other hydroxyalkylcellulose derivatives. Use of hydroxypropylcellulose has not been found to product suitable moldable capsule shells with El00 as the sole polymer." However, that is what is specifically claimed for use herein. The polymer Eudragit 4135F may be extruded and molded using a blend of hydroxypropylcellulose polymers without the need for a secondary polymer.

Consequently, the McAllister reference teaches away from the presently claimed invention.

However, in response to Applicant's argument that use of hydroxypropylcellulose has not been found to product suitable moldable capsule shells with EI00 as the sole polymer, while this may be true, it does not preclude the use of hydroxypropylcellulose with Eudragit 4135F. Further, in response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). McAllister is cited in combinations with secondary references for the teachings of combination of HPC having different molecular weights are known in the art.

Applicant argues that it is an improper hindsight analysis to now combine the secondary references with the McAllister reference for the purposes of utilizing two HPC polymers of differing molecular weight. This is not withstanding the fact that the secondary references do not use the HPC polymers for same purpose as do Applicants.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does

not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Applicant argues that the release rates in Brown is SIF fluid on page 45 vary from 2-9 to 11-18 hours (none of which include HPC). On page 46, when surfactants are added is also highly variable. Further examples with HPC, shown on pages 47-49 demonstrate more consistent and reproducible results but here the release rate is still much more delayed.

However, In response to applicant's argument that Brown fails to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the release profiles) are not recited in the rejected claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant argues that the Examiner then uses the secondary references, in particular Nishioka to teach a combination of HPC polymers to "obtain any release profile desired". However, as noted this is in a tablet matrix with a particular active ingredient homogenously embedded within the matrix.

In response to applicant's arguments, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in

any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). The secondary references are cited solely for the teachings of the use of HPC as a release modifying agent are known in the art.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. TRAN whose telephone number is (571) 272-0606. The examiner can normally be reached on M-F 8:30 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert A. Wax can be reached on (571) 272-0623. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S. TRAN/
Primary Examiner, Art Unit 1615